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TASK 8. AS-6 DATA TELEMETERING SYSTEM

Field Unit: Final packaging of the digital converter is now approaching completion. The interconnection technique employed will be wire wrapping, which will then be soldered to provide an even more positive connection. This approach avoids unnecessary connectors and further, yields a lighter as well as a more reliable subassembly.

A preliminary model of the stepping oscillator package was completed. It will be used with the exciter and digital converter and later for system tests.

The exciter mechanical and electrical design was completed, released and sheet metal parts are now starting to come in from the shop. Final assembly will begin shortly.

Mechanical design of the power amplifier has been completed and is due to be released to the shop soon.

The breadboard exciter and power amplifier have been combined electrically for use in the servo amplifier testing as well as life testing. These tests will be run for some time to gather reliability data. This configuration provides a complete 10-channel system capable of remote operation.

Considerable data have been taken on antennas during this period. Greatest effort has been spent on 31-1/2-foot horizontal wire at various heights above the ground; a 12-foot vertical; and a series of amateur band mobile whips. Plans are now in preparation for a series of antenna tests to be conducted between [redacted] 25X1

A prototype model of the i-f amplifier-limiter chassis was previously completed. A prototype model of the i-f amplifier, employing the Clevite Trans-filter, following the delay lines, has been completed. Plans are now underway to interconnect the various prototype units and start overall receiver tests. The complete prototype receiver will be completed when the front-ends are received from [redacted] Prototype models of these units should be available in early January. 25X1

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Transmit Interrogation Terminal: The breadboard model of the transmit terminal was tested with the [redacted] 231D Transmitter and found to work satisfactorily. Fabrication of the portions of the final model has been started.

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Receive Terminal: The interference tests were unable to be accomplished during this report period because of lack of certain critical components. The missing parts are due in soon, following which the test will be run. Other tests on the breadboard terminal continue. About 50% of the deliverable chassis of the data cabinet and the first r-f cabinets are complete. Several of these chassis have been checked out.

Work on this terminal has been interfered with, to some extent, because of pressures associated with the RS-16 and AS-4 rework program.

TASK 9. LINEAR EXCITER FOR THE AS-4A

This program has been delayed indefinitely pending decisions on the future course of the AS-4B program. This action has been concurred in by the cognizant Government Engineers.

TASK 10. FABRICATION OF RS-16B

Mechanical design of the exciter has been completed and sheet metal parts for the prototype model are completed. Assembly of the prototype model will be initiated shortly.

Construction of the six keying amplifiers, to be diverted to Task 7 has been completed and assembly of the ten remaining units for the RS-16B program is now underway.

Fabrication of a prototype battery box is now under way and production of the remaining units should begin during the next reporting period.

Design of the coder was finished during this period.

TASK 11. RS-16B BATTERY CHARGER

No effort has been expended on this Task during the reporting period due to the pressure of work on Task 7 and other programs.

TASK 12. RS-16B ANTENNA TUNERS

Work on the sensing and detection circuits required by the antenna coupler is continuing. A breadboard of these circuits and the tuning network itself should be completed during the next reporting period.